

THAT WHICH IS CLAIMED IS:

1. A ferrule, comprising:

5 a molded ferrule body having an end face and defining a plurality of bores extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body further defining at least one opening through the end face adapted to receive an alignment member for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis extending at least partially through the ferrule body; and

10 wherein the ferrule body comprises an integrally formed geometry feature on an exterior surface of the ferrule body; and

wherein the end face is not machined subsequent to molding the ferrule body.

15 2. The ferrule of claim 1, wherein the geometry feature is selected from the group consisting of a geometric reference feature, a reference datum, a measurement datum, a polishing angle, and an end face comprising a first surface and a second surface, wherein the first surface is normal to the longitudinal axis defined by the opening and the second surface is disposed at a predetermined angle relative to the first surface and the longitudinal axis.

20 3. The ferrule of claim 1, wherein the geometry feature is accessible for making visual measurements when the alignment member is received within the opening through the end face without the use of an interferometer having 3D capabilities.

4. A ferrule, comprising:

a molded ferrule body having an end face and defining a plurality of bores extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body further defining at least one opening through the end face adapted to receive an alignment member for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis extending at least partially through the ferrule body, the ferrule body further defining a molded geometric reference feature on an exterior surface of the ferrule body; and

wherein the end face is not machined subsequent to molding the ferrule body; and

wherein the geometric reference feature eliminates the need for using a truncated precision measurement pin to determine the angularity of a plane defined by a region of interest on the end face of the ferrule body.

5. The ferrule of claim 4, further comprising at least one bumper extending outwardly from the end face of the ferrule body.

6. The ferrule of claim 5, wherein the geometric reference feature is located on the at least one bumper.

7. The ferrule of claim 4, wherein the geometric reference feature is recessed on the ferrule body relative to the end face.

8. The ferrule of claim 4, wherein the geometric reference feature protrudes from the end face.

5 9. The ferrule of claim 4, wherein the geometric reference feature is disposed within the at least one opening.

10. The ferrule of claim 4, wherein the geometric reference feature is accessible for making visual measurements when the alignment member is received within the opening through the end face without the use of an interferometer having 3D capabilities.

10 11. The ferrule of claim 4, wherein the geometric reference feature is not altered throughout the useful life of the ferrule.

12. A multifiber ferrule for a fiber optic connector, the ferrule comprising:

15 a molded ferrule body having an end face comprising a first surface defining a first plane that is generally normal to a longitudinal axis of the ferrule body, and a second surface defining a second plane disposed at a predetermined angle relative to the first surface and the longitudinal axis of the ferrule body, the ferrule body further defining a plurality of bores extending through the ferrule body for receiving end portions of
20 respective optical fibers, the ferrule body further defining at least one opening through the end face adapted to receive an alignment member for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating multifiber ferrule; and

wherein the end face is not machined subsequent to molding the ferrule body.

13. The multifiber ferrule of claim 12, further comprising a geometric reference feature operable for measuring the angularity of a plane defined by a region of interest on the end face; and

5 wherein the geometric reference feature is accessible for making visual measurements after assembly of the fiber optic connector without the use of an interferometer having 3D capabilities, thereby eliminating the need for using a truncated precision measurement pin to measure the angularity of the plane defined by the region of interest on the end face.

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14. A method for determining the angularity of a plane defined by at least a portion of an end face of a ferrule, comprising:

 providing a ferrule having a ferrule body, an end face and a geometric reference feature on an exterior surface of the ferrule body proximate the end face;

15 measuring a reference plane defined by the geometric reference feature;

 measuring the plane defined by the at least a portion of the end face of the ferrule;
and

 determining at least one end face angle based upon an angular difference between the reference plane defined by the geometric reference feature and the plane defined by
20 the at least a portion of the end face of the ferrule.

15. The method of claim 14, wherein the geometric reference feature is accessible during the measuring steps for making visual measurements without the use of an interferometer having 3D capabilities.

16. The method of claim 14, wherein the measuring steps eliminate the need for using a truncated precision measurement pin to determine the end face angle of the ferrule.

5 17. A method of forming a ferrule, comprising:

molding a ferrule body comprising an end face and defining a plurality of bores extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body also defining at least one opening through the end face adapted to receive a guide pin for aligning the end portions of the respective optical fibers with
10 corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis extending at least partially through the ferrule body; and

wherein the ferrule body comprises a geometry feature on an exterior surface of the ferrule body that is formed by molding and is not subsequently machined.

15 18. The method of claim 17 wherein the geometry feature is accessible for making visual measurements without the use of an interferometer having 3D capabilities, thereby eliminating the need for using a truncated precision measurement pin to determine the angularity of at least a portion of the end face of the ferrule.

20 19. The method of claim 17, wherein the geometry feature is selected from the group consisting of a geometric reference feature, a reference datum, a measurement datum, a polishing angle, and an end face comprising a first surface and a second surface, wherein the first surface is generally normal to the longitudinal axis and the second surface is disposed at a predetermined angle relative to the first surface and the longitudinal axis.

20. A method of forming a multifiber ferrule for a fiber optic connector, comprising:

5 molding a ferrule body comprising an end face and defining a plurality of bores extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body also defining at least one opening through the end face adapted to receive an alignment member for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating multifiber ferrule, the opening defining a longitudinal axis extending at least partially through the ferrule body, the end face comprising a first surface defining a first plane that is generally normal to
10 the longitudinal axis and a second surface defining a second plane disposed at a predetermined angle relative to the first surface and the longitudinal axis of the ferrule body, the ferrule body further comprising an integrally formed geometry feature proximate the end face; and

15 wherein the geometry feature comprises a reference surface that is accessible for making visual measurements after the alignment member is received within the opening through the end face defined by the ferrule body without the use of an interferometer having 3D capabilities; and

20 wherein the geometry feature eliminates the need for using a truncated precision measurement pin to determine the angularity of a plane defined by a region of interest on the end face.